

What is Claimed Is:

1. A router configured for forwarding a received message, the router comprising:

a network interface configured for receiving the received message from a source node, and forwarding the received message to a destination node, via an open protocol network, according to selected application operations;

5 an extensible markup language (XML) parser configured for parsing XML tags from a portion of the received message, the XML tags specifying prescribed attributes; and

an application resource configured for interpreting the prescribed attributes from the XML tags based on runtime execution of the application resource, the application resource initiating the selected application operations for routing the received message to the destination node.

2. The router of claim 1, wherein the application resource is configured for interpreting the prescribed attributes based on retrieval of prescribed syntax and semantics information.

3. The router of claim 2, further comprising a vocabulary library having vocabulary modules, each specifying the prescribed syntax and semantics information for a corresponding group of XML tags, the application resource configured for retrieving the prescribed syntax and semantics information from a selected one of the vocabulary modules based on parsing a first XML tag specifying the corresponding one vocabulary module.

4. The router of claim 3, wherein the application resource is configured for accessing, as one of the selected application operations, prescribed attribute information from a server providing information services via the open protocol network, the prescribed attribute information used for routing the received message.

5. The router of claim 4, wherein the application resource accesses application services information as the prescribed attribute information based on parsing an XML tag specifying an application services requirement.

6. The router of claim 5, wherein the application services information specifies quality of service information, the router configured for routing the received message based on the quality of service information.

7. The router of claim 6, wherein the application resource is configured for accessing destination information based on parsing an XML tag specifying a destination requirement.

8. The router of claim 7, wherein the open protocol network is an Internet Protocol network.

9. The router of claim 7, wherein the application resource is configured for selecting the destination node based on correlating the destination information with the quality of service information.

10. The router of claim 4, wherein the application resource is configured for accessing security information from the server based on parsing an XML tag specifying a security requirement, the application resource configured for selectively routing the received message based on the accessed security information.

11. The router of claim 10, wherein the application resource is configured for accessing destination information based on parsing an XML tag specifying a destination requirement, the destination information specifying multiple destination nodes, the application resource configured for selectively routing the received message to authorized ones of the destination nodes based on the accessed security information.

12. The router of claim 4, wherein the application resource is configured for accessing destination information based on parsing an XML tag specifying a document type, wherein the prescribed syntax and semantics information specifies respective destinations for respective document types, the application resource configured for determining the destination node based on the destination information and the document type.

13. The router of claim 12, wherein the application is configured for retrieving quality of service information for available destinations, the router configured for determining the destination node based on the received quality of service information and the document type.

14. A method in a router of forwarding a received message, the method comprising:
receiving the received message from a source node via an open protocol network;
parsing XML tags from a portion of the received message, the XML tags specifying prescribed attributes;
initiating selected application operations for routing the received message based on interpreting the prescribed attributes from the XML tags according to runtime execution of an application resource; and
selectively outputting the received message to a destination node based on the selected application operations.

15. The method of claim 14, wherein the initiating step includes interpreting the prescribed attributes based on retrieval of prescribed syntax and semantics information.

16. The method of claim 15, wherein the interpreting step includes retrieving the prescribed syntax and semantics information from a selected one of a plurality of vocabulary modules based on parsing a first XML tag specifying the corresponding one vocabulary module, each vocabulary

module accessible by the router specifying the prescribed syntax and semantics information for corresponding group of XML tags.

17. The method of claim 16, wherein the initiating step includes accessing the prescribed attribute information from a server providing information services via the open protocol network, and determining routing attributes based on the prescribed attribute information.

18. The method of claim 17, wherein the accessing step includes accessing application services information as the prescribed attribute information based on parsing an XML tag specifying an application services requirement.

19. The method of claim 18, wherein the determining step includes determining the routing attributes based on quality of service information specified within the application services information.

20. The method of claim 19, wherein the accessing step includes accessing destination information based on parsing an XML tag specifying a destination requirement.

21. The method of claim 20, wherein the open protocol network is an Internet Protocol network.

22. The method of claim 20, wherein the determining step includes selecting the destination node based on correlating the destination information with the quality of service information.

23. The method of claim 17, wherein the accessing step includes accessing security information from the server based on parsing an XML tag specifying a security requirement, the determining step including selectively routing the received message based on the accessed security information.

24. The method of claim 23, wherein the accessing step further includes accessing destination information based on parsing an XML tag specifying a destination requirement, the destination information specifying multiple destination nodes, the selectively routing step including forwarding the received message to authorized ones of the destination nodes based on the accessed security information.

25. The method of claim 17, wherein the accessing step includes accessing destination information based on parsing an XML tag specifying a document type, wherein the prescribed syntax and semantics information specifies respective destinations for respective document types, the determining step including identifying the destination node based on the destination information and the document type.

26. The method of claim 25, wherein the accessing step further includes retrieving quality of service information for available destinations, the determining step including identifying the destination node based on the received quality of service information and the document type.

27. A computer readable medium having stored thereon sequences of instructions for forwarding a received message by a router, the sequences of instructions including instructions for performing the steps of:

receiving the received message from a source node via an open protocol network;

parsing XML tags from a portion of the received message, the XML tags specifying prescribed attributes;

initiating selected application operations for routing the received message based on interpreting the prescribed attributes from the XML tags according to runtime execution of an application resource; and

selectively outputting the received message to a destination node based on the selected application operations.

28. The medium of claim 27, wherein the initiating step includes interpreting the prescribed attributes based on retrieval of prescribed syntax and semantics information.

29. The medium of claim 28, wherein the interpreting step includes retrieving the prescribed syntax and semantics information from a selected one of a plurality of vocabulary modules based on parsing a first XML tag specifying the corresponding one vocabulary module, each vocabulary module accessible by the router specifying the prescribed syntax and semantics information for corresponding group of XML tags.

30. The medium of claim 29, wherein the initiating step includes accessing the prescribed attribute information from a server providing information services via the open protocol network, and determining routing attributes based on the prescribed attribute information.

31. The medium of claim 30, wherein the accessing step includes accessing application services information as the prescribed attribute information based on parsing an XML tag specifying an application services requirement.

32. The medium of claim 31, wherein the determining step includes determining the routing attributes based on quality of service information specified within the application services information.

33. The medium of claim 32, wherein the accessing step includes accessing destination information based on parsing an XML tag specifying a destination requirement.

34. The medium of claim 33, wherein the open protocol network is an Internet Protocol network.

35. The medium of claim 33, wherein the determining step includes selecting the destination node based on correlating the destination information with the quality of service information.

36. The medium of claim 30, wherein the accessing step includes accessing security information from the server based on parsing an XML tag specifying a security requirement, the determining step including selectively routing the received message based on the accessed security information.

37. The medium of claim 36, wherein the accessing step further includes accessing destination information based on parsing an XML tag specifying a destination requirement, the destination information specifying multiple destination nodes, the selectively routing step including forwarding the received message to authorized ones of the destination nodes based on the accessed security information.

38. The medium of claim 30, wherein the accessing step includes accessing destination information based on parsing an XML tag specifying a document type, wherein the prescribed syntax and semantics information specifies respective destinations for respective document types, the determining step including identifying the destination node based on the destination information and the document type.

39. The medium of claim 38, wherein the accessing step further includes retrieving quality of service information for available destinations, the determining step including identifying the destination node based on the received quality of service information and the document type.

40. A router configured for forwarding a received message, the router comprising:
means for receiving the received message from a source node via an open protocol network;
means for parsing XML tags from a portion of the received message, the XML tags specifying prescribed attributes;

means for initiating selected application operations for routing the received message based on interpreting the prescribed attributes from the XML tags according to runtime execution of an application resource; and

means for selectively outputting the received message to a destination node based on the selected application operations.

41. The router of claim 40, wherein the initiating means is configured for interpreting the prescribed attributes based on retrieval of prescribed syntax and semantics information.

42. The router of claim 41, wherein the interpreting means is configured for retrieving the prescribed syntax and semantics information from a selected one of a plurality of vocabulary modules based on parsing a first XML tag specifying the corresponding one vocabulary module, each vocabulary module accessible by the router specifying the prescribed syntax and semantics information for corresponding group of XML tags.

43. The router of claim 42, wherein the initiating means is configured for accessing the prescribed attribute information from a server providing information services via the open protocol network, and determining routing attributes based on the prescribed attribute information.

44. The router of claim 43, wherein the initiating means is configured for accessing application services information as the prescribed attribute information based on parsing an XML tag specifying an application services requirement.

45. The router of claim 44, wherein the initiating means is configured for determining the routing attributes based on quality of service information specified within the application services information.

46. The router of claim 45, wherein the initiating means is configured for accessing

destination information based on parsing an XML tag specifying a destination requirement.

47. The router of claim 46, wherein the open protocol network is an Internet Protocol network.

48. The router of claim 46, wherein the initiating means is configured for selecting the destination node based on correlating the destination information with the quality of service information.

49. The router of claim 45, wherein the initiating means is configured for accessing security information from the server based on parsing an XML tag specifying a security requirement, and selectively routing the received message based on the accessed security information.

50. The router of claim 49, wherein the initiating means is configured for accessing destination information based on parsing an XML tag specifying a destination requirement, the destination information specifying multiple destination nodes, the initiating means configured for forwarding the received message to authorized ones of the destination nodes based on the accessed security information.

51. The router of claim 43, wherein the initiating means is configured for accessing destination information based on parsing an XML tag specifying a document type, wherein the prescribed syntax and semantics information specifies respective destinations for respective document types, the initiating means configured for identifying the destination node based on the destination information and the document type.

52. The router of claim 51, wherein the initiating means is configured for retrieving quality of service information for available destinations, and identifying the destination node based on the received quality of service information and the document type.